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REMARKS

Applicant's counsel thanks the Examiner for the courteous telephone interview of September 13, 2006, the careful consideration given the application and the favorable consideration given the proposed amendment to the claims recited below.

In summary of the telephone interview, Applicant's counsel provided a brief description of the various processes relating to rubber reduction technology including reactions that depolymerize rubber (i.e. reactions that break carbon-carbon, carbon-sulfur and sulfur-sulfur bonds) versus reactions that devulcanize rubber (i.e. reactions that break carbon-sulfur and sulfur-sulfur bonds but not carbon-carbon bonds). The prior art made of record in this case (i.e. US 5,516,952 Lee et al., and US 5,891,926 Hunt et al.) was characterized in terms of these processes, the reactants and solvents that they require, and Applicant's counsel cited passages throughout the prior art that clearly differentiated the prior art from the claims of the instant application.

At the conclusion of the interview, the Examiner indicated that an Amendment after Final to clarify the step of purging air from each of the independent method claims, specifically, "purging air to remove oxygen from the reactor" (wherein text added to the pending claims is shown by underlining) would be sufficient to overcome the outstanding objections in this case, and the case would be in a form suitable for allowance. Applicant has amended all the independent method claims (claims 1, 15 and 23) to recite "purging air to remove oxygen from the reactor" as discussed in the interview. Applicant respectfully requests early entry of the amendment after Final Action and allowance of the application.

Further details concerning the amendment made herein and the difference between the prior art and the claims of the instant application are provided herewith.

CLAIMS

Claims 1, 15 and 23 have been amended to replace the phrase "purging air from the reactor" with "~~purging air~~ to remove oxygen from the reactor ~~—~~". The amendment clarifies the step of purging recited in the claims and does not introduce new matter.

As all dependent claims contained in the application depend on either claim 1 or 15, it is submitted that all the claims of the application now incorporate the amendment recited above.

Claim Rejections-Anticipation and/or Obviousness

In the advisory action mailed 07/20/2006, the Examiner indicated that Applicant had not clearly differentiated or shown unobviousness over the cited prior art. In view of the discussions during the telephone interview and the proposed amendment considered favorable by the Examiner, Applicant asserts that the claims as amended are novel and unobvious in view of the prior art cited by the Examiner (US 5,516,952 Lee et al., and US 5,891,926 Hunt et al.) A brief explanation is provided below:

Lee et al., is directed to oxidative decoupling of scrap rubber. This is evident from the use of the term "oxidative decoupling" in the title, abstract, field of invention, three times in the first paragraph of the Summary of invention and numerous times through the remainder of the specification. Oxidative decoupling absolutely requires the use of an oxidant (i.e. oxygen). This is evident from column 5, line 5 which states:

"The oxidant or oxidizing agent is preferably air, oxygen or a mixture of oxygen and inert gases.". A person of skill in the art will appreciate that air comprises about 20% oxygen. This is why air is encompassed within the term "oxidant" by Lee.

The claims of the instant application have been amended to recite the step of purging air to remove oxygen from the reactor. This feature now clearly distinguishes the claims of the instant application from the prior art cited. Specifically, Lee requires the use of oxygen whereas the claims as amended provide exactly the opposite teaching.

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It is also submitted that the Lee reference pertains to oxidative decoupling of carbon-carbon, carbon-sulfur and sulfur-sulfur bonds- a process for breaking down rubber polymer materials into products of low molecular weight. This is in contrast to the present application which provides methods for devulcanizing of rubber polymer (i.e breaking of carbon-sulfur bonds and sulphur-sulphur bonds but not carbon-carbon bonds to produce products of high molecular weight. Thus the Lee patent is directed to a separate and distinct process from that provided by the instant invention.

In respect of the Hunt et al reference cited by the Examiner, it is respectfully submitted that Hunt et al., does not disclose or suggest the step of purging air to remove oxygen as recited in the amended claims of the application. Moreover, Hunt absolutely requires the use of 2-butanol as a solvent. The Hunt reference does not disclose or even suggest that water could be used as a solvent or co-solvent as recited in the claims of the instant application. Further, a person of skill in the art would not be motivated to use water as a solvent based on the Hunt et al reference or the combined teaching of Hunt and Lee as the prior art patents are directed to separate and distinct chemical processes.

For these reasons, it is believed that the application is now in condition for allowance, which is respectfully requested.

If there are any further fees required by this communication, please charge such fees to our Deposit Account No. 16-0820, Order No. 36115.

Respectfully Submitted,

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